ON A NEW SPECIES OF ANGOPHORA.

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ANGOPHORA MELANOXYLON, Sp.nov.

"Coolabah."

(Plate ii.)

A medium-sized tree, from 40-50 feet high, with a diameter up to 3 feet; the bark somewhat similar to a "Box" bark, much less fibrous than that of *A. subvelutina*, F.v.M., or *A. intermedia*, DC. Branchlets glabrous or minutely publicent, with or without bristles.

Leaves much more numerous than in the other species of Angophora, mostly under two inches long, rarely exceeding $2\frac{1}{2}$ in., and under $\frac{1}{2}$ in. broad; lanceolate or cordate at the base, with rounded auricles, sessile or almost so, nearly always opposite and decussate; blue-green on the upper side, pale yellow-green on the lower or under side, which is occasionally minutely pubescent; lateral veins fine, parallel, indistinct on the upper surface; margins recurved.

Flowers in *dense terminal corymbs* or short panicles, about the same size as, or perhaps a little less than, those of *A. lanceolata*, Cav. Calyx 2-4 lines in diameter, turbinate, glabrous or with a few bristles; teeth acute. Petals white, imbricate, shortly or abruptly acuminate.

Fruiting calyx 4 to 6 lines long, often as broad at the top. Longitudinal ribs very prominent; rim thin, sometimes incurved.

Hab.—Coolabah, N.S.W. (Messrs R. H. Cambage and W. Bäuerlen); New Angledool, N.S.W. (Mr. A. Paddison); Bourke, N.S.W. (Mr. R. H. Cambage); West Bogan, N.S.W. (Mr. R. W. Peacock).

Timber.—The timber of this species appears to be quite different from that of the coastal species, inasmuch as it is of a very dark brown (in fact, almost black) colour, and not pale coloured as is the case with other Angophoras. It has a pretty wavy figure, and in colour and hardness is almost identical with American Walnut, and is thus particularly suitable for cabinet work.

Kino.—The kino is in brownish-coloured masses, having a dull fracture. It is very friable, so much so that it crumbles to an ochrey-coloured powder between the fingers. It is but little soluble in cold water, forming a whitish turbid solution, the turbidity disappearing when boiled, the solution again becoming turbid on cooling. The substance causing the turbidity is removed by extracting with ether, and the reactions show it to be aromadendrin. No eudesmin is present. The presence of this substance in the kinos of the Angophoras shows a chemical connection between these trees and the Eucalypts. Eudesmin appears to be the more common in the Eucalypts, but in the kinos of some species both eudesmin and aromadendrin are present; while only in one species as yet has aromadendrin alone been found (*E. calophylla* of West Australia).

The tannin present in the kino of this Angophora gives a green coloration in a very dilute aqueous solution with one drop of ferric chloride, and in this respect differs from the kino of E. calophylla, which gives a blue coloration under like conditions (Henry G. Smith).

Fodder.—This is a tree that should be extensively cultivated on the arid land of the interior, as it is drought-resisting, and the leaves are much relished by cattle. A great point in its favour is that it is very foliaceous.

That this tree should in the past have missed recognition is rather strange, as it is well known throughout the area indicated by the above localities. The rare shape of some of the leaves (the lanceolate form) connects it with *A. intermedia*, whilst the rounded auricular base of the predominant-shaped leaf gives it some affinity to *A. subrelutina*.

The nature of its bark and timber differentiates the tree at once from any described species. The compact, terminal panicle, as well as the larger flowers, also differentiate it from Λ . subrelutina.

From A. cordifolia it differs also in its smaller flowers, fruits, and leaves.

It appears to have little affinity with A. lanceolata.

In botanical sequence it is placed between A. subveluting and A. intermedia, as the leaves have the form of those of both these species. The inflorescence more nearly approaches A. lanceolata; but as stated above it is differentiated from this species by the nature of its bark and timber.

In passing it may be mentioned that the town and railway station on the main western line, 424 miles west of Sydney, are named after this tree, where a cluster of them stands at present near the railway platform; these are known for miles around as "Coolabah."

The name "Coolabah" is also given to two or three species of Eucalypts, and it comes rather as a surprise to a botanist travelling west to be shown these particular trees as "Coolabahs," and then to discover that they are Angophoras.

It is mostly a crooked tree; and it is from this feature that the aboriginal name "Coolabah" is derived (W.B.) Under the name of Narrow-leaved Apple Tree Mr. R. W. Peacock describes it as "A very crooked-branching tree, attaining the height of from 30 to 40 feet. When in blossom it is most attractive, being a mass of white bloom. It is sometimes felled for sheep. The trees in this district (West Bogan) are trimmed by sheep as far as they can reach" (Agric. Gaz. N. S. Wales, April, 1899, p. 267).

EXPLANATION OF PLATE.

Fig. 1.-Flowering twig of plant with two forms of leaves on same stem. Fig. 2.—Individual leaf from another tree.

Fig. 3.—Bud Fig. 4.—Expanded flower slightly enlarged.

Fig. 5.-Fruits.